

Claims:

1. A method for registration of a mobile node on a packet-based communication network comprising the steps of:

receiving a care-of address for said mobile node, at a home network, under a first circumstance from a server computer on a first network, wherein said care-of address is an expanded address identifying the network address location for said mobile node; and

updating the mobile node's registration address on the home network with said care-of address.

2. The method of registration of a mobile node on a packet-based communication network of Claim 1 further comprising the step of:

requesting said care-of address from a serving mobility manager on the first network.

3. The method for registration of a mobile node on a packet-based communication network of Claim 2 further comprising the step of:

allocating said mobile node care-of address on the first network after said request step.

4. The method for registration of a mobile node on a packet-based communication network of Claim 3 wherein the care-of address is transmitted through the serving mobility manager on the first network to said home network.

5. The method for registration of a mobile node on a packet-based communication network of Claim 3 wherein the care-of address is obtained from a pool of expanded addresses provided to said serving mobility manager on the first network.

6. The method for registration of a mobile node on a packet-based communication network of Claim 2 wherein said first network is a foreign network and said first circumstance is a power-up performed by said mobile node on said foreign network.

7. The method for registration of a mobile node on a packet-based communication network of Claim 2 wherein said first network is a foreign sub-network located on said home network and said first circumstance is a power-up performed by said mobile node on said foreign sub-network.

8. The method for registration of a mobile node on a packet-based communication network of Claim 1 wherein the care-of address is allocated by an AAA server computer on said first network.

9. A method of performing a mobile node hand-off on a packet-based communication network, comprising the steps of:

responding at a second network to a request for said mobile hand-off from a first network, said response including a care-of address, said care-of address having an expanded address capable of identifying the network address location for the mobile node; and

updating the care-of address for the mobile node on the first network.

10. The method of performing a mobile node hand-off on a packet-based communication network of Claim 9 wherein the mobile node receives said care-of address from a serving mobility manager.

11. The method of performing a mobile node hand-off on a packet-based communication network of Claim 9 wherein the first network is a first foreign sub-network on a home network.

12. The method of performing a mobile node hand-off on a packet-based communication network of Claim 10 wherein the second network is a second foreign sub-network on a home network.

13. The method of performing a mobile node hand-off on a packet-based communication network of Claim 9 wherein the first network is a first foreign network.

14. The method of performing a mobile node hand-off on a packet-based communication network of Claim 13 wherein the second network is a second foreign network.

15. The method of performing a mobile node hand-off on a packet-based communication network of Claim 9 further comprising the steps of:

moving the mobile node to said second network after requesting  
said system hand-off.

16. The method of performing a mobile node hand-off on a packet-based communication network of Claim 9 further comprising the steps of:

moving the mobile node to said second network before requesting  
said system hand-off.

17. A method of registering a mobile node on a packet-based communication network comprising the steps of:

transmitting a registration request from a first network to a server computer on a second network;

allocating a care-of address from said server computer on said second network, said care-of address having an expanded address for identifying a network address location of said mobile node,

transmitting said care-of address to said first network.

18. The method for registering a mobile node on a packet-based communication network of Claim 17 wherein the mobile node moves to the second network after the transmission of the registration request.

19. The method of registering a mobile node on a packet-based communication network of Claim 18 wherein the mobile node moves to the second network before the transmission of the registration request.

20. The method for registering a mobile node on a packet-based communication network of Claim 17 wherein the care-of address is transmitted through an AAA server computer to said first network.